6-10-97

HRE-8J

Mr. J. Michael Jarvis
400 Forsythe Street
P.O. Box 667
Franklin, Indiana 46131

Re: Franklin Power Products, Inc.
Amphenol Corporation
IND 044 587 848
Administrative Order on Consent
Dated November 27, 1990

Dear Mr. Jarvis:

The United States Environmental Protection Agency (U.S. EPA) has approved your revised Quality Assurance Project Plan (QAPjP) dated May 25, 1991, for the above referenced facility. Enclosed are two original signature pages and a copy of a U.S. EPA memorandum which provide comments pertaining to the audit of your contract laboratory. Please provide us with the original signed copies of the completed signature pages within fourteen (14) days of receipt of this letter.

Please be advised that the data requirements incorporated in the above referenced Administrative Order on Consent are preeminent and must be met in the final Resource Conservation Recovery Act Facility Investigation report.

If you should have any questions concerning this letter, please contact William Buller of my staff at (312) 886-4568.

Sincerely yours,

Susan Sylvester, Chief
IL/IN Technical Enforcement Section

Enclosure

cc: James Keith (w/enclosure)
WW Engineering & Science, Inc.
Jim Meyers

bcc: Valerie Jones, ESD (w/o enclosure)

OFFICIAL FILE COPY

CONCURRENCE REQUESTED FROM REB			
OTHER STAFF	REB STAFF	REB SECTION CHIEF	REB BRANCH CHIEF
12/11/91	12/10/91	12/11/91	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:
5SMQA

MEMORANDUM

Date: AUG 15 1991

Subject: Approval of Quality Assurance Project Plan (QAPjP) for the RCRA Facility Investigation/ Corrective Measures Study (RFI/CMS) Activity at the Franklin Power Products/Amphenol Facility Site in Franklin, Indiana

From: Valerie J. Jones
Regional Quality Assurance Manager

To: Joseph M. Boyle, Chief
RCRA Enforcement Branch

Attention: William Buller, Project Coordinator

I am providing approval of the second revision QAPjP for RFI/CMS Activities at the Franklin Power Products/Amphenol Facility Site in Franklin, Indiana. The QAPjP was received by Quality Assurance Section (QAS) on August 7, 1991, (QAS Log-in No.34). The signed approval page is attached to this memorandum. Please have Project Coordinator provide final sign-off and send us a copy of complete signature page in two weeks for our records.

RCRA FACILITY INVESTIGATION/CORRECTIVE MEASURES STUDY
(RFI/CMS)

QA PROJECT PLAN

Project Title: Former Amphenol Facility, Franklin, Indiana
U.S. EPA Project Officer: William Buller

Prepared By: WW Engineering & Science

Approved: _____
U.S. EPA Project Coordinator

Approved: _____
U.S. EPA Technical Contact

Approved: Carl J. Jones 8/15/91
U.S. EPA Regional Quality Assurance Manager

Approved: _____
Project Manager, WW Engineering and Science

Approved: _____
Quality Assurance Manager, WW Engineering and Science

WW Engineering & Science, Inc.
627 North Morton Street • Bloomington, IN 47404 • (812) 336-6972, Fax (812) 336-3991

July 26, 1991

William Buller
U.S. EPA, Region V, 5HR-12
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Buller:

SUBJ: SUPPLEMENTAL INFORMATION AND EXPLANATION FOR EPA QAPjP COMMENTS - FORMER AMPHENOL SITE RFI/CMS

Purpose

In response to our telephone conversations of July 8, 9 and 10, I am submitting four copies of additional information that will supplement, correct or revise information present in the revised field and laboratory QAPjPs submitted to your office. I will also address comments IIIA, IIIB, IIIC, IIIE.1, IIIE.4, IIIH, and the last sentence of IIIF of the March 26, 1991 memorandum from George Schupp, Chief of the Quality Assurance Section, to your office. A letter to Mr. J. Michael Jarvis dated April 23, 1991 and signed by Joseph M. Boyle for Kevin Pierard, Acting Chief of the RCRA Enforcement Branch, had requested that we disregard the above sections of Mr. Schupp's memorandum. It had also requested that we omit Section 1.2.2 (Geologic Setting), Section 1.3 (Previous Investigations and Remedial Response) and Appendix A from our original QAPjP submittal. Additional comments by Dr. Cheng-Wen Tsai you gave to me by telephone on July 10, 1991 are addressed in this communication. Required supplemental information and page changes are attached to this document.

shown in Figure 5. We do not have information regarding the methods or detection limits for these analyses.

Table 3 in the IT Work Plan shows the results of quarterly ground water sampling by IT in wells IT-1, IT-2, IT-3, MW-3, MW-9, MW-12 and the storm drain discharge to Hurricane Creek. Analyses were for Volatile Organic Compounds only. Well locations are shown in Figure 4, and the outfall location is shown in Figure 14 (location SW02). Table 13 shows parameters detected in ground water by sampling events conducted in 1984, 1985 and 1986. We do not have information regarding the methods or detection limits for these analyses.

Comment III.A.2 - Section 2.2 of the IT Work Plan discusses the previous investigations.

Comment III.A.3 - Table 1 and Figure 3, as discussed for comment III.A.1 presents the analytical data requested. Section 2.2 of the IT Work Plan discusses previous investigations.

Comment III.A.4 - See Tables 1 and 2, as referenced above. They are the results of this investigation.

Comment III.B - See Section 2.2.3 of the IT Work Plan, and Figures at the end of the Work Plan. Figure 4 shows the positions of geologic cross sections; Figures 7, 8 and 9 show geologic cross sections A-A', B-B' and C-C', respectively. Figure 10 shows regional ground water contours, and Figure 11 shows ground water contours at the site as of May 3, 1985 (Section 2.4.4 of the Work Plan).

- 2 other wells will be analyzed for Appendix IX compounds, less organochlorine pesticides.

In addition, we have prepared and attached a SOP (APPENDIX G) for procedures to avoid contamination of deeper aquifers.

Comment III.E.4 - An inventory of materials used and disposed of at the former Amphenol plant (IT Work Plan, Section 2.0 Introduction) indicates that there was metal hydroxide sludge, various solvents and thinners, and cyanide solutions. Previous testing discussed in the IT Work Plan (Section 2.2), and the replies to comments in this communication has established that the contaminants of concern at this site are VOCs, metals, and total and amenable cyanide. Total VOC's only will be analyzed for in the soil vapor samples.

Comment III.H - Three upgradient wells will be utilized for this RFI/CMS. Analytical data from ground water samples will be collected, evaluated, and compared with previous upgradient analytical data to determine the best method of establishing background levels for individual parameters.

Other Comments and Corrections

In accordance with verbal comments communicated from Dr. Cheng-Wen Tsai, we reviewed and compared the parameters and detection limits listed in Table 10.1 of the laboratory QAPjP, and Appendix A of the field QAPjP. We have revised the two tables to specify detection limits for water only. Soils will not be tested for this RFI/CMS. The

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

Site Correspondence File

MEMORANDUM

REPLY TO ATTENTION OF:
5SMQA

DATE: JUN 19 1991

SUBJECT: Expedited Review Request for the Wauconda Sand & Gravel (Wauconda, IL) Remedial Design/Remedial Action Quality Assurance Project Plan (QAPjP)

FROM: Valerie J. Jones, Chief
Monitoring & Quality Assurance Branch

TO: Rick Karl, Acting Chief
Remedial & Enforcement Response Branch

I have received your memorandum dated June 18, 1991 requesting an expedited review for the Wauconda San & Gravel QAPjP. The Quality Assurance Section will provide comments or recommend approval for the QAPjP by June 25, 1991.

In order to provide this expedited review, it shall be necessary to move back the due dates for other Superfund and RCRA projects. These projects include:

SITE NAME(QAS LOG-IN #)	ORIGINAL DUE DATE	NEW DUE DATE
Yeoman Creek, IL (SF#1542)	6-27-91	7-1-91
Franklin Power, IN (RCRA #19)	7-1-91	7-7-91

If you should have any questions regarding this memo, please contact George Schupp (6-6221) of my staff.

cc: Rebecca Frye, RERB
Rich Boice, RERB
William Buller, REB

DATE : June 13, 1991
TO : D. Payne, LSSS Chief
THRU : J. Thakkar, DPO
FROM : K. Cromer, Weston/ESAT
THRU : P. Hershey, ETM

TID : 05-91-06-26
TASK : 4930

SUBJECT : Technical Review of First Revision QAPjP for RCRA Facility Investigation/Corrective Measures Study at Amphenol Facility, Franklin, Indiana per RCRA QAPjP Guidelines

An in-depth, technical review of the subject QAPjP and the associated project-specific laboratory QAPjP (2nd revision) from SWLO, based on the RCRA QAPjP review guidelines provided by D. Payne, has been completed. This report summarizes the results of our review, which was focused primarily on the laboratory QAPjP, per the Task Monitors instructions. The project QAPjP (WW Engineering) was reviewed to provide project specific information required in order to evaluate the laboratory QAPjP. A summary of information and comments from the project QAPjP will be presented first, followed by specific comments on the laboratory QAPjP.

I. Project Description

A. Historical Activity - The site has been used (1961 - 1983) for the manufacture of electric connectors, which included electroplating and machining operations, assembly of manufactured components and the storage of an inventory of raw materials/compounds used in production. The type and amount of activities at the site from 1983 to present are only vaguely described in these documents, although the plant was apparently not in operation for most (possibly all) of this period. Mention is made of underground cyanide storage tanks, lapping compound tanks and TCA/TCE tanks in various sections of the QAPjP.

B. Previous Data - There is no specific discussion or presentation of any existing analytical data from this site. There are general references throughout the QAPjP to the existence of previous studies and some general results from these studies. In Section 1.4, Project Objectives, reference is made to studies from 1984 to 1986. In Section 13, Corrective Action, it is indicated that previous results suggest that groundwater samples taken from locations south and east of the site may contain **medium to high** concentrations of contaminants. No indication of specific analytes found at this site were found, except for a limited listing of volatile organic compounds in the SOP for HNu Soil Screening. One additional document was referenced, the RCRA Facility Investigation Work Plan prepared by IT Corporation in October, 1988, which may possibly have more information on existing analytical data (not available for review).

C. Target Compounds - The definition of target compounds for this project is unacceptable. There are several different descriptions of target compounds in the text and in various tables in both QAPjP's that are very inconsistent and contradictory. All references to the target compounds for this project must be revised to be consistent and more clearly presented.

1. Section 1.3 states that VOC's, metals and total and amenable cyanide will be analyzed without specifying for what matrix or number of samples. Also, it states that two groundwater monitoring wells will be sampled, without specifying which wells or how many samples, for Appendix IX compounds, minus the organochlorine pesticides.

2. Appendix A contains the project Target Compound List.

   a. There are two lists of volatile organic compounds; one contains 34 compounds, the other contains 55 compounds (all Appendix IX compounds are accounted for). Which list will be used for this project?

   b. The semivolatile organic compound list contains 122 compounds, while there are 135 Appendix IX compounds that could be analyzed as SVOC's. The other compounds are unaccounted for.

   c. It is indicated that Appendix IX organochlorine pesticides are excluded from the required list of analytes by the Consent Order. The specific compounds to be excluded should be clearly identified, and these should not included on any list or description of the target compounds to be analyzed. All Appendix IX organochlorine pesticides are listed in the tables included in this documentation and should be removed. Reference is also made to SW-846 method 8080 (Organochlorine Pesticides and PCBs), which is inappropriate. A separate, PCB-specific method (SOP) should be written for the analysis of PCB's.

   d. The three common herbicides that are included in Appendix IX are included with the pesticide/PCB grouping. This is incorrect, in that these compounds must be analyzed by a different method (SW-846-8150).

e.There are two tables presenting the inorganic analytes. The analytes are the same on each list, with the exception of cyanide amenable to chlorination and sulfide. The detection limits (practical quantitation limits) are consistent for water samples, but are quite different for soil samples. The table from the IT Work Plan is acceptable. The PQL values listed in the table of Appendix IX compounds are questionable (extremely low).

f.Dioxin/Dibenzofurans are not listed in any of the target compound tables.

D. Sample Network and Rationale - It is not clearly or unambiguously indicated what locations will be sampled, especially for the groundwater samples from monitoring wells. Section 1.3 indicates that two groundwater monitoring wells will be sampled. Section 1.5, however, lists 13 different groundwater monitoring wells. Sampling plans for other matrices (surface water, soil, sediment, soil gas) are more clearly described.

E. Analysis Plan - Table 1, Sampling Summary

1.The varying number of samples within each sample matrix is not sufficiently explained. Please provide a more detailed, clearly written description of what wells or locations will be sampled for each analysis.

2.Pesticides and herbicides can not be analyzed from a single 1 liter sample. Herbicides should be a separate item from pesticides.

3.Organochlorine pesticides are not to be analyzed according to statements made in the QAPjP. Organophosphorus pesticides appear to be analyzed as part of the semivolatile organic compounds analysis. Therefore, it doesn't appear that reference to pesticides is necessary.

4. PCB's cannot be analyzed as part of the dioxin/dibenzofuran analysis; therefore, drop this reference to PCB's.

5.PCB's analysis should be a separate item with its own 1 liter sample.

6.Why is there a separate sample analysis for phenols? This is not described in the QAPjP. Also, phenols are analyzed as part of the semivolatile organic compounds analysis.

II. Sampling Procedures

A. Section 4.10 - QA/QC Samples

1. It is indicated that MS/MSD samples will be taken for VOC analyses only. This is incorrect. MS/MSD samples should also be taken for all organic analyses. (semivolatiles, pesticides, PCB's, herbicides)

2. It is not a routine procedure to use "acid-washed quartz sand" for soil equipment blanks. Region 5 normally recommends collecting what is referred to as rinsate blanks for soil sampling. These are samples of DI water that is collected from rinsing the clean sample equipment.

III. Analytical Procedures

A. This section indicates that SW-846 method 8140 (Organophosphorus Pesticides) will be used, which is inconsistent with the rest of the QAPjP. If this is correct, these compounds should be listed separately in Appendix A, not included with the semivolatiles group of compounds.

IV. Corrective Action

The following information is presented in this section.

"Previous site sampling results indicate that there may be **medium to high** analyte levels in the groundwater samples south and east of the facility (sic - wells IT2, IT3, IT1A, MW12, MW3(?), MW25, MW22, MW23, MW24) and low analyte levels in the background wells. In samples with high analyte levels (particularly organics), analyses will be performed both on diluted and undiluted samples to insure that any analytes present will be detected."

The paragraph following the one above addresses handling of sample interferences in general terms.

Use -

"various sample cleanup methods"

"alternate analytical protocols...less sensitive to interference."

"resampling and reanalysis"

It is very good that the QAPjP addresses the potential analytical problems that could be caused by high concentrations of contaminants and possible interferences. We make the following suggestions that may help insure that more of the data from these samples will be valid and usable.

A. Samples that are known to possibly contain high concentrations of analytes should be identified to the laboratory.

B. The laboratory should utilize sample preparation and analytical methods specifically written for high concentrations for these samples.

C. The use of smaller sample sizes for analysis of samples containing high concentrations of contaminants is preferred to the approach of dilution mentioned in the QAPjP.

D. Surrogate and matrix spiking levels should be adjusted as necessary for the samples containing high concentrations of contaminants in order to prevent diluting these analytes below detection limits, thereby losing this QC information.

E. Where possible, the high concentration samples should not be used as matrix spike samples.

V. Appendix C - Field GC SOP

A. The Initial Calibration section indicates that linearity over the 3-level concentration range will be assumed. This is unacceptable. Linearity should be demonstrated by some specific procedure. One possible method would be to calculate the %RSD of the three calibration factors, specifying some minimum %RSD value (20%). If this value is not achieved, corrective action and recalibration would be required.

B. Continuing Calibration - Should also specify that is %D value is exceeded and recalibration is necessary, that all samples analyzed since the last acceptable continuing calibration sample are required to be reanalyzed.

VI. Southwest Laboratory of Oklahoma QAPjP

The laboratory has attempted to write a project specific QAPjP, however it falls short of that goal. The QAPjP appears to be a modification of their generic QAPjP which does not incorporate enough project information, either through the lack of its availability to the laboratory or by simple omission. It appears in many instances that the laboratory QAPjP is relying on information in the project QAPjP, which is inadequate or incomplete. There is also no assurance that the project QAPjP will be available to laboratory personnel for reference if required.

A. The laboratory QAPjP is even more vague than the project QAPjP on the target compounds to be analyzed for this project. The only reference, in the Project Description section, to the required analyses states that "aqueous samples" will be analyzed for Appendix IX compounds, and that "soil samples" will be analyzed for volatiles, metals and cyanide (total and amenable).

1. Based on this, cyanide is the only compound that an analyst would be sure that was required.

2. Although Appendix IX compounds are identified and mapped to specific SW-846 methods in a later section of the QAPjP, there is no indication that this project does not require analysis of organochlorine pesticides.

3. There is also no indication of the specific volatile and inorganic analytes to be analyzed for in the soil samples.

B. The sample matrices intended to be collected for this project are not clearly indicated in the laboratory QAPjP. Aqueous and soil samples are mentioned, however there will be groundwaters, surface waters, soil borings and sediments. There is also no indication of the numbers of samples of each matrix to be collected nor any indication of the specific analyses by matrix. A corrected and improved version of the project QAPjP Table 1 should be included in the laboratory QAPjP.

C. There is a general discussion in the project QAPjP of procedures for addressing sample preparation and analytical problems that could be caused by either interferences or high concentrations of contaminants in samples. There is no reference to this information in the laboratory QAPjP or any other evidence that the laboratory is aware of these potential analytical problems. There is only a generic reference to the SW-846 sample cleanup methods for organics. The laboratory should be aware of these potential problems and the QAPjP should specifically address the laboratories sample preparation and analytical procedures designed to solve these types of problems.

D. A Table of Laboratory Control Limits in section 4 shows the laboratories surrogate and matrix spike compounds for each SW-846 method required to analyze the Appendix IX List, with the exception of dioxins/dibenzofurans. There are some minor errors and suggested changes in this table.

1.Laboratory specific accuracy and precision control limits are provided for most of the organic analyses for water matrices, with the remaining values coming straight from the various methods with no modification. The values taken from the methods are referenced to CLP, which is incorrect. The values shown in this table are all from SW-846 methods.

2.Completeness requirements for all laboratory measurements is specified as 90%. Region 5 requires a minimum completeness of 95% for laboratory measurements. Please modify.

E. Calibration - Section 7

A number of appendices are referenced in the laboratory QAPjP that are not included in the document as received. Some of these contain information pertaining to calibration standards. Therefore, we cannot fully evaluate the laboratories calibration procedures due to the missing appendices. Some specific comments on calibration procedures follow.

1.GC Analysis - The Initial Calibration verification requirements are unacceptable. As written, these requirements are % RSD for RF of $\pm$35% for "well-behaved" compounds and $\pm$50% for "problematic compounds". It allows use of linear regression, straight-line, quadratic or point-to-point to achieve acceptable curves. With this mix of procedures, you wouldn't be able to tell how each data value was calculated, which would result in problems with data comparability.

2.GC Analysis - The Continuing Calibration verification has the same problems as above. In addition, if the %D values fall outside of acceptable limits the procedure allows the analyst to redraw the calibration curve in order to try to achieve an acceptable value. Also, it does not specify that samples analyzed after the last acceptable continuing calibration analysis are to be reanalyzed.

3.GC/MS Analysis - One of the CCC compounds specified in the appropriate SW-846 method is not included in both the VOA list (1,1-dichloroethene) and the SVOA list (2,4-dichlorophenol). These compounds should be included. It is also incorrectly stated that the minimum acceptable RF for the SVOA (BNA) SPCC compounds is 0.300. The correct value as specified in the SW-846 method is 0.05.

F. 1.The laboratories list of Appendix IX compounds, with PQL's for water and soils, is included in Section 10 (Internal Quality Control Checks). This is the same list as included in Appendix A of the project QAPjP, and the same comments as in I.C.2 above apply to the laboratory QAPjP. Additionally, the laboratory should clarify whether the organophosphorus pesticides will be analyzed by method 8270 or 8140.

2.Although the laboratory provides a discussion of the various types of detection limits (IDL, LOD, MDL, PQL), it is not indicated what the laboratory will use as their reporting limits. This needs to be clearly stated, not simply left to be assumed. It would also be appropriate to discuss their procedure for reporting (or non-reporting) of estimated values that are below the reporting limits but above MDL.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:
5HR-12

APR 23 1991

Mr. J. Michael Jarvis
Franklin Power Products, Inc
P.O. Box 667
Franklin, Indiana 46131

Re: Consent Order
U.S. EPA-Franklin Power Products/Amphenol Corporation
Dated November 27, 1990

Dear Mr. Jarvis:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the Quality Assurance Project Plan (QAPjP) submitted by Franklin Power Products pursuant to the above referenced Consent Order. Prior to approval of the QAPjP, the comments noted in the enclosed memorandum dated March 26, 1991, should be addressed in a revised QAPjP. However, we advise that comments III A, B, C, E.1 and E.4, H, and the last sentence of F of the March 26, 1991, memorandum be disregarded. We also advise that Section 1.2.2 (Geologic Setting), Section 1.3 (Previous Investigation and Remedial Response), and Appendix A of the QAPP be omitted. In addition, to the revisions prescribed in the March 1991 memorandum, we require the following revisions:

a. Page 2 - substitute Southwest Oklahoma Laboratory of Oklahoma for Compuchem Laboratories.

b. Revise Figure 3 so the soil boring locations for SB6 and SB7 correspond to the locations shown in Exhibit B of the Consent Order. A total of nine soil borings should be shown on Figure 3.

c. Section 1.5, first subparagraph - omit the word volatile since a larger scope of organics will be addressed.

d. Revise Figure 5 to show the additional soil vapor sampling locations as indicated in the enclosed illustration.

e. Revise Figure 4 so that sampling point location of SW01 and SW02 agree with Figure 14 of the RFI Workplan - October 1988.

f. Revise the HSL list of volatiles so that it agrees with Table 9 of the RFI Workplan - October 1988.

If you have any questions call William Buller of my staff at (312) 886-4568. Please provide a revised QAPP to U.S. EPA within thirty (30) days of receipt of this letter.

Sincerely yours,

Kevin Pierard, Acting Chief
RCRA Enforcement Branch

Enclosures

cc: James Keith, W.W. Engineering & Science, Inc.

bcc: George Schupp
Cheng-Wen Tsai

5HR-12:WBuller:nd:6-4568:4/22/91:#14, Franklin.LTR

ap 4/23/91

	TYP.	AUTH.	IL/IN TECH. ENF. SEC.	MI/WI TECH. ENF. SEC.	OH/MN TECH. ENF. SEC.	IL/MI/WI ENF. PROG. SECTION	IN/MN/OH ENF. PROG. SECTION	RCRA ENF. BR. CHIEF	O.R. A.D.D.	WMD DIR
INIT. DATE	J.S.P. 4/22/91	WB 4/22/91	JMP 4/22/91					JMB 4/23/91		

Official File copy

e. Revise Figure 4 so that sampling point location of SW01 and SW02 agree with Figure 14 of the RFI Workplan - October 1988.

f. Revise the HSL list of volatiles so that it agrees with Table 9 of the RFI Workplan - October 1988.

If you have any questions call William Buller of my staff at (312) 886-4568. Please provide a revised QAPjP to U.S. EPA within thirty (30) days of receipt of this letter.

Sincerely yours,

Joseph M. Boyle, for

Kevin Pierard, Acting Chief
RCRA Enforcement Branch

Enclosures

cc: James Keith, W.W. Engineering & Science, Inc.

file

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF: 5SMQA

MEMORANDUM

DATE: MAR 26 1991

SUBJECT: Review of the First Draft of Quality Assurance Project Plan (QAPjP) for the RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) Activity at the Franklin Power Products/Amphenol Facility Site in Franklin, Indiana

FROM: George Schupp, Chief
Quality Assurance Section

TO: William Buller, Project Coordinator
RCRA Enforcement Branch

We have reviewed the first draft of the subject QAPjP, which was received by the Quality Assurance Section (QAS) on February 22, 1991 (QAS Log-In No. 2). We find this subject QAPjP is rather a generic document, which lacks of many details. This QAPjP is not approvable until deficiencies listed in this memorandum are adequately addressed.

Our comments on this draft QAPjP are summarized as follows:

I. TTILE/SIGNATURE PAGE

A. The title/signature page should be revised to include provisions for approval signature by the following responsible parties:

1. Project Officer/Manager of the engineering firm;

2. Quality Assurance Officer of the engineering firm, etc.

B. Please change "U.S. EPA QA Branch Officer" to "U.S. EPA Regional Quality Assurance Manager".

II. TABLE OF CONTENT

A. The table of content should include the page number where each section or subsection can be found.

III. PROJECT DESCRIPTION

A. In Section 1.3 (Previous Investigation and Remedial Response), please address the following:

1. A summary table of the available past data should be provided. This table should include the sample type, contaminants detected, the methods used for the analysis and their method detection limits, and concentration range of each contaminant detected.

2. Discussion on contaminants detected in the previous activities should account for both soil and water samples. The description of the current draft QAPjP mentioned only the water samples. Please revise it to include discussion on soil samples as well.

3. Througout this section, only data of volatile organics are mentioned. Please revise the description to include analytical results of other parameters such as metals, cyanide, semivolatiles, etc..

4. For soil samples, the results of analysis were referred to the ATEC's summary report dated October 24, 1984; however, this report is not attached to this subject QAPjP for review. Please provide a summary table and, in the text, reference the analytical results of soil samples to the summary table.

B. In Section 1.3.3, it indicated that hydrogeologic investigation was done by IT in 1985; however, no information pertaining to number of aquifers, flow direction of groundwater, etc., are provided in this section. Please provide these information if available.

C. It is not clear whehter there are private wells, within 3 mile radius around the site, that may be impacted by the contaminants released from the site. If the answer to this question is yes, then the private well samples should also be collected for analysis with low detection limits. A SOP should be written for this purpose.

E. In Table 1 (Sampling Summary), please address the following:

1. Different number of samples of the same matrix (i.e. groundwater) are designated for different analysis. Please provide the rationale for selecting sampling locations as well as number of samples for different analysis. Furthermore, are these samples (or data) collected for analysis will be adequate to achieve one of the project objective, which is to determine the plume. Please address it .

2. The holding time for mercury should be specified to be 26 days.

3. Water samples collected for the analysis of volatiles should be preserved with HCl.

4. Please expalin why only VOCs and metal/cyanide are to be tested for surface water, soil. sediment and soil vapor samples.

F. The target compounds for this RFI/CMS is referred to the Work Plan and the Consent order. However, neither of these documents are attached to QAPjP for review. Please provide the complete target compounds list, including the required detection limit for both soil/sediment and water samples. Furthermore, it is not clear why the general water quality parameters such as chloride, sulfate, etc., are not included as target compounds. Please explain.

G. The project objectives in Section 1.5 is not adequately addressed. The description should include the intended data usage and the required level data quality objectives (DQOs). The intended data usage should not be confused with general project objectives, which is the scope of work, and should be specifically identified. The level of DQOs for the RFI should be level IV, except the field screening using HNu, which should be at least level II.

H. In Section 1.5, it is stated that data from RFI will be used to define the background values for contaminants in groundwater; however, it fails to provide details how it will be acomplished. Please describe how the background values will be defined from the RFI data.

I. In page 11 of 12, it is indicated that two of the sediment samples will be collected as composite samples. This is not acceptable for the analysis of volatile organics. Please revise it so that all VOA samples will be collected as grab samples.

IV. PROJECT ORGANIZATION AND REPSONSIBILITY

A. Figure 7 should be revised to include the following:

1. U.S. EPA Project Coordinator;

2. U.S. EPA Region V Regional Quality Assurance Manager;

3. U. S. EPA Region V Central Regional Laboratory, etc.

B. Please address the function/responsibility of Region V Quality Assurance Manager, Central Regional Laboratory, and the Project Coordinator.

V. QUALITY ASSURANCE OBJECTIVES

A. The preparation of equipment blanks should be properly described or referenced.

B. The level of field QA effort is not addressed. Please provide the required level of field QA effort by describing the collection of field QC samples and the frequency of their collection.

VI. SAMPLING PROCEDURE

A. In Section 4.1, please address the following:

1. It is stated that all sample containers and reagent used as preservatives will be provided by the contract laboratory. However, the procedures used by the contract laboratory to prepare/cleaning sample containers are not provided. Please provide the standard operating procedure (SOP) used by the contract lab to clean the sample bottle, including the quality assurance/quality control practice used to ensure the quality of sample containers.

   NOTE: If more than one laboratory is providing sample containers, separate SOP used by each laboratory should be attached to the QAPjP for review/approval.

2. In the third paragraph of page 1 of 10, please add a sentence to state that, if pH of sample is geater than 7.0, then the pH meter will be recalibrated with pH 11 buffer and pH 7 buffer, and then pH of the sample will be remeasured.

B. In Section 4.5 (Groundwater Sampling Procedure), please provide the specification of sample filtering in field. Please note that groundwater collected for the analysis of metals is required to be field filtered prior to the addition of preservative. Please add a sentence to address this.

NOTE: samples collected for the analysis of parameters other than metals should not be filtered.

C. In Section 4.6 (Surface Water Sampling procedures), please state that surface water collected for metal analysis will not be field filtered.

D. In Section 4.7 (Sediment Sampling Procedure), please state that sediment samples will be collected along with the surface water samples from the same sampling location.

E. In Section 4.8 and 4.9, HNu is mentioned to be used to select samples for laboratory analysis, a standard operating procedure shall be written and attached to QAPjP for review/approval. Use the attached Guideline to prepare the required SOP.

F. In Section 4.10, the extra sample volume that is needed for the matrix spike/matrix sike duplicate (MS/MSD) analysis is required for both volatiles, and other organic analysis such as semivolatiles, pesticides, etc. The sample designated for MS/MSD should be collected triple the normal volume for volatile organic analysis, and double the normal volume for other organic analysis. Please revise it accordingly.

VII. SAMPLE CUSTODY AND RECORDKEEPING

A. The description of the chain-of-custody is not complete. The chain-of custody begins at the time of preparation for the field activity, and it consists of three major parts, namely chain-of-custody procedure for field activity (sampling and measurements), chain-of custody procedure for laboratory analysis, and the final evidence file. Please address the following:

1. chain-of-custody for the field activity -

2. The final project evidence file -

NOTE: The description should include the contents of the porject evidence file, and the file custodian.

B. If more than one laboratory is to be used for the project, chain-of-custody to be followed by each laboratory should be documented.

VIII. CALIBRATION PROCEDURE AND FREQUENCY

A. For calibration of laboratory instruments, please provide a brief description on how the calibration of each instrument will be done, and reference the operational details to the appropriate SOP.

IX. ANALYTICAL PROCEDURES

Please address the following:

A. The analytical methodologies to be used for each analysis should be specified in this section. It is not acceptable to reference it to the laboratory QAPjP, which do not contain these information. It is required that methods to be used should be identified in the QAPjP. Please address them accordingly.

B. The HNu is originally mentioned in Section 4.5 to be used for the purpose of personnel health and safety; however, it is mentioned in this section that it will be used to select samples for laboratory analysis. For this purpose, a standard operating procedure (SOP) should be written and submitted for review/approval.

C. The target compounds is referred to Appendix B, which does not include all of the compounds to be tested, and the required detection limits. Please complete the Appendix B.

D. Please provide the procedures to be used to measure the groundwater flow direction.

X. DATA REDUCTION, VALIDATION, AND REPORTING

A. In Section 8.2 (Data Reduction and Reporting), please address the following:

1. The data reporting format to be used to report the analytical results should be described in this section. Please outline the content of the data package for each analysis.

2. The procedures to be used to reduce the instrument printout to the final reporting unit should be described.

B. In Section 8.3 (Data Validation), when the EPA data validation guideline is referenced, please provide the name of the document, including the date issued. The most current documents are as follows:

1. Laboratory Data Validation Functional Guidelines for Evaluating Organic Analysis, February 1, 1988.

2. Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analysis, July 1, 1988.

C. In Section 8.1 (General), bullet #8 is not quite appropriate because, for metals analysis using graphite furnace AA, matrix spike is required for all samples to determine whether method of addition should be used. Please revise this bullet accordingly.

XI. INTERNAL QUALITY CONTROL CHECK

A. The description of the QAPjP element should also account for internal quality control check of the field sampling and measurements. The internal QC check for field activity should include the collection of field QC samples for field sampling, and the initial calibration, continuing calibraiton check, duplicate analysis, etc. for field measurements. Please address them.

B. The acceptance control limits for the internal QC checks should be specified for both field and laboratory measurements. Please specify the acceptance control limits.

XII. PERFORMANCE AND SYSTEM AUDITS

The description of performance and system audits should include both internal and external audits of field and laboratory activities:

A. Internal audits of both field sampling/measurements and laboratory analysis are the responsibility of contracted engineering firm's project manager and/or quality assurance officer. The description of internal audits should include the following:

1. Identify the parties that are responsible for field audits and laboratory audits respectively.

2. Describe the procedures to be used for field and laboratory audits respectively.

B. External audits of both field sampling/measurements and laboratory analysis is the responsibility of the U.S. EPA. The Region V Central Regional Laboratory (CRL) is responsible for auditing laborator(ies) for approval/disapproval. The CRL and/or Central District Office (CDO) are responsible for field audits. Please address them accordingly.

XIII. PREVENTATIVE MAINTENANCE

A. The description of the preventative maintenance of field instruments should account for the field gas chromatography. Please address it accordingly.

XIV. DATA ASSESSMENT SECTION

A. The heading of this section should be revised to read, "SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA PRECISION, ACCURACY, AND COMPLETENESS.

B. It is not acceptable to reference the data assessment procedures and equations to the laboratory QAPjP. Please provide the procedures and equations to be used in this section.

XV. CORRECTIVE ACTIONS

A. The description of the corrective actions should also include the following:

1. The line of authority in initiating, developing, approval and implementing corrective action. Identify the parties responsible for each function.

2. Corrective actions to be taken for the field sampling and measurements should also be described.

XVI. APPENDIX (QAPjP of Southwest Laboratory of Oklahoma, Inc)

This is an rather generic and incomplete document. We only comment on part of the document:

A. The completeness specified in Section 4 is inconsistent with the QAPjP. Please revise it accordingly.

B. For the analysis of volatiles, semivolatiles, and pesticide/PCBs, both 600 series methods and SW-846 methods are listed. Please delete the 600 series which are not to be used.

C. Please clarify whether dioxin will be tested. If not, it should be deleted from Section 4.

D. In Section 6, please provide example of internal sample tracking during sample storage, sample preparation and analysis.

E. In Section 7, the intial calibration standard solution and the continuing calibration standard solution should contain all of the target compounds. Please revise it accordingly.

If you have any questions regarding this memorandum, please contact Cheng-Wen Tsai, Chemist, of my staff at 886-6220.

We also would strongly suggest that, after the contractor's QAPjP preparer has reviewed QAS'comments, a QAPjP meeting or conference call shall be held between QAS, RPM and contractor's QAPjP preparer to shorten the QAPjP revision/approval process.

Attachment

DATE: 2/13/91

SUBJECT: REVIEW OF THE QUALITY ASSURANCE PROJECT PLAN FOR THE FORMER AMPHENOL FACILITY FRANKLIN, INDIANA RFI/CMS

FROM: K GUNTER

TO: DR. C TANG

The Amphenol facility previously was the site of several manufacturing and storage companies. The Qapp should include information about the nature of each company, chemicals used in processing, as well as products and by products formed. This data, if available, would aid the site characterization and choice of analytical methods.

The Qapp lists Compuchem and Southwest laboratories as the contract laboratory. It is unclear whether this is an error or if both labs are to be used. In either case specific laboratory analytical methods and standard operating procedures should be included for this study.

The Qapp reports that previous investigations of this site show evidence of the following compounds in both ground water and soil samples:

trichloroethylene (TCE), tetrachloroethylene (PCE) , toluene 1,1,1-trichloroethane (TCA), and dichloroethane (DCA).
The Qapp references an appendix A, that was not present at the time of review.

Target compounds set forth in the Qapp are limited and random. Volatile organics, metals and cyanide will be analyzed for all collected samples. Appendix IX constituent analysis are confined to two arbitrary ground water monitoring wells.

SUMMARY

This Qapp is unacceptable in its present form and should be amended to include the following.

1) Greater detail of site history, including raw materials, products and by products manufactured or stored at site.
2) Clarification of contract lab/labs to be used for this study.
3) Standard operating procedures for each analytical method to be used.
4) Inclusion of the elusive appendix A.
5) Rationale for the selection of target compound list.

12 MAY 1988

Review of Quality Assurance Project Plan
RFI Work Plan - Amphenol Corporation

William E. Muno, Acting ORIGINAL SIGNED BY
Associate Director WILLIAM E. MUNO
Office of RCRA

James Adams, Chief
Quality Assurance Office

Please review the enclosed Quality Assurance Project Plan and provide your comments to William Buller, RCRA Enforcement Branch, 5HS-12.

We would appreciate a reply by June 9, 1988.

Enclosure

5HS-1:WBuller:nd:6-4568:5/9/88

MR 5/11/88

	TYPIS	AUTHOR	OTHER STAFF	UNIT CHIEF	SECT. SECY	SECT. CHIEF	BRNCH CHIEF	WSMD DIR
INIT. DATE	5/9/88	5/9/88		5/9/88	5/10/88	5-10-88	WEM 5/11	

for S.B